

APPARATUS AND METHOD FOR REPORTING PROGRAM
HALTS IN AN UNPROTECTED PIPELINE AT NON-
INTERRUPTIBLE POINTS IN CODE EXECUTION

Abstract of the Invention

1 In a target processor having a non-protected pipeline, the
2 execution code is typically provided with interruptible
3 code portions and with non-interruptible code portions.
4 The non-interruptible code portions prevent implementation
5 of a real time interrupt that would corrupt the code so
6 that execution could not be resumed. A storage unit is
7 provided that stores a signal permitting a code execution
8 halt even during a non-interruptible code portion. In this
9 manner, a program developer can determine the status of the
10 processor at any point in the code execution. When the
11 execution halt is initiated during a non-interruptible code
12 segment, a bit is set in a bit position of a memory-mapped
13 register. This bit position can be transferred from the
14 target processor to the host processing unit during a
15 transfer of status data.